What is claimed is:

1. An inkjet recording head for ejecting ink, comprising:

a plurality of sidewalls to form a plurality of ink channels separated by the plurality of sidewalls, the plurality of sidewalls comprising at least partially a piezoelectric material;

a bottom plate to form a bottom face of the plurality of ink channels, the bottom plate comprising a piezoelectric material; and

a plurality of electrodes formed on the plurality of side walls, for being applied an electric voltage to cause pressure change in the plurality of ink channels by shear deformation of the plurality of sidewalls, and to eject the ink in the plurality of ink channels;

wherein all of the plurality of ink channels are divided into two or more groups of ink channels, where a group of ink channels is composed of ink channels between which at least one of the plurality of ink channels is sandwiched;

wherein an ink ejection operation is performed successively in a time-sharing mode for each of the group of ink channels, while satisfying the condition of

$$|CTC + CTE| \leq 10\ (\%);$$

where a crosstalk between ink channels in one group of ink channels due to a compliance ratio of the plurality of sidewalls to the ink in the plurality of ink channel is CTC; and a crosstalk between ink channels in one group of ink channels due to a leak of electric field caused by electric voltage applied to the plurality of electrodes is CTE.

2. The inkjet recording head of claim 1, wherein each of the plurality of sidewalls comprises two layers of piezoelectric material laminated via a contact face, each of the two layers being polarized different with each other in the direction perpendicular to the contact face.

3. The inkjet recording head of claim 1, wherein the plurality of electrodes are present in a range of at least **a**/2 high from the bottom face of the plurality of ink channels, where an ink flow path width of each of the plurality of ink channels is **a**.

4. The inkjet recording head of claim 1, wherein the plurality of the electrodes are formed by means of a plating method.

5. The inkjet recording head of claim 1, wherein each of the plurality of ink channels has an ink flow path width of not greater than 100 μm, and ink channel depth of not greater than 300 μm.

6. The inkjet recording head of claim 1, wherein the plurality of ink channels are formed of:

a substrate, on which a plurality of grooves are formed, the grooves being separated by the plurality of sidewalls comprising at least partially a piezoelectric material; and

a cover plate adhered to the top face of the plurality of sidewalls;

wherein the thickness of piezoelectric material at the bottom face of each of the plurality of ink channels is at least 10 μm.

7. The inkjet recording head of claim 5, wherein the plurality of ink channels are formed of:

a substrate, on which a plurality of grooves are formed, the grooves being separated by the plurality of

sidewalls comprising at least partially a piezoelectric material; and

a cover plate adhered to the top face of the plurality of sidewalls;

wherein the thickness of piezoelectric material at the bottom face of each of the plurality of ink channels is at least 10 μm.

8. The inkjet recording head of claim 1, wherein the density of the plurality of ink channels is at least 150 dpi.

9. The inkjet recording head of claim 7, wherein the density of the plurality of ink channels is at least 150 dpi.

10. The inkjet recording head of claim 1, wherein the density of the plurality of ink channels is at least 300 dpi.

11. The inkjet recording head of claim 7, wherein the density of the plurality of ink channels is at least 300 dpi.

12. The inkjet recording head of claim 1, wherein the density of the plurality of ink channels (dpi) and the depth

of said plurality of ink channels (μm) satisfies the following relation:

the density (dpi) x the depth (μm) $\leq 5.5 \times 10^4$.

13. The inkjet recording head of claim 5, wherein the density of the plurality of ink channels (dpi) and the depth of said plurality of ink channels (μm) satisfies the following relation:

the density (dpi) x the depth (μm) $\leq 5.5 \times 10^4$.

14. The inkjet recording head of claim 6, wherein the density of the plurality of ink channels (dpi) and the depth of said plurality of ink channels (μm) satisfies the following relation:

the density (dpi) x the depth (μm) $\leq 5.5 \times 10^4$.

15. The inkjet recording head of claim 1, wherein the ink is a water-based ink.

16. The inkjet recording head of claim 12, wherein the ink is a water-based ink.

17. The inkjet recording head of claim 1, wherein all of the plurality of ink channels are divided into three groups of ink channels, where a group of ink channels is composed of ink channels between which two of the plurality of ink channels is sandwiched.

18. The inkjet recording head of claim 12, wherein all of the plurality of ink channels are divided into three groups of ink channels, where a group of ink channels is composed of ink channels between which two of the plurality of ink channels is sandwiched.